



H A N D B O O K
of
Environmental
Data on
Organic
Chemicals



KAREL VERSCHUEREN

3 r d

E D I T I O N

CONTENTS

INTRODUCTION 1

I. Arrangement of Categories 1

- A. Properties 1
- B. Air Pollution Factors 1
- C. Water and Soil Pollution Factors 1
- D. Biological Effects 2

II. Arrangement of Chemicals 2

III. Order of Elements 2

- A. Properties 2
- B. Air Pollution Factors 2
- C. Water and Soil Pollution Factors 2
- D. Biological Effects 3

IV. Explanatory Elements 3

- A. Properties 3
 - 1. Boiling Points 4
 - 2. Vapor Pressure 4
 - 3. Vapor Density 6
 - 4. Water Solubility 6
 - 5. Octanol/Water Partition Coefficient 10
 - 6. Henry's Constant (H) 20
- B. Air Pollution Factors 24
 - 1. Conversion between Volume and Mass Units of Concentration 24
 - 2. Odor 25
 - 3. Hazard Potentials of Atmospheric Pollutants 33
 - 4. Natural Sources 44
 - 5. Manmade Sources 45
 - 6. Control Methods 45
- C. Water Pollution Factors 45
 - 1. Biodegradation 45
 - 2. Oxidation Parameters 49
 - 3. Impact on Biodegradation Processes 53
 - 4. Waste Water Treatment 54
 - 5. Alteration and Degradation Processes 59
- D. Biological Effects 63
 - 1. Arrangement of Data 63
 - 2. Classification List 63
 - 3. Organisms Used in Experimental Work with Polluting Substances or in Environmental Surveys 65
 - 4. Discussion of Biological Effects Tests 74

GLOSSARY 83
ABBREVIATIONS 91
ENVIRONMENTAL DATA 95
BIBLIOGRAPHY 1913
MOLECULAR FORMULA CROSS-INDEX 2033
CAS CROSS-INDEX 2051

CONTENTS

INTRODUCTION

I. **Introduction**
1. **Background**
A. **Properties**
B. **As Pollution Factor**
C. **Water and Soil Pollution Factor**
D. **Toxicity**
E. **Biological Effects**
II. **Analysis of Chemicals**
III. **Order of Elements**
A. **Properties**
B. **As Pollution Factor**
C. **Water and Soil Pollution Factor**
D. **Toxicity**
E. **Biological Effects**
IV. **Explanatory Elements**
A. **Properties**
1. **Boiling Point**
2. **Vapor Pressure**
3. **Vapor Density**
4. **Water Solubility**
5. **Octanol-Water Partition Coefficient**
6. **Henry's Law Constant**
7. **Water Solubility**
8. **Water Solubility**
9. **Water Solubility**
10. **Water Solubility**
11. **Water Solubility**
12. **Water Solubility**
13. **Water Solubility**
14. **Water Solubility**
15. **Water Solubility**
16. **Water Solubility**
17. **Water Solubility**
18. **Water Solubility**
19. **Water Solubility**
20. **Water Solubility**
21. **Water Solubility**
22. **Water Solubility**
23. **Water Solubility**
24. **Water Solubility**
25. **Water Solubility**
26. **Water Solubility**
27. **Water Solubility**
28. **Water Solubility**
29. **Water Solubility**
30. **Water Solubility**
31. **Water Solubility**
32. **Water Solubility**
33. **Water Solubility**
34. **Water Solubility**
35. **Water Solubility**
36. **Water Solubility**
37. **Water Solubility**
38. **Water Solubility**
39. **Water Solubility**
40. **Water Solubility**
41. **Water Solubility**
42. **Water Solubility**
43. **Water Solubility**
44. **Water Solubility**
45. **Water Solubility**
46. **Water Solubility**
47. **Water Solubility**
48. **Water Solubility**
49. **Water Solubility**
50. **Water Solubility**
51. **Water Solubility**
52. **Water Solubility**
53. **Water Solubility**
54. **Water Solubility**
55. **Water Solubility**
56. **Water Solubility**
57. **Water Solubility**
58. **Water Solubility**
59. **Water Solubility**
60. **Water Solubility**
61. **Water Solubility**
62. **Water Solubility**
63. **Water Solubility**
64. **Water Solubility**
65. **Water Solubility**
66. **Water Solubility**
67. **Water Solubility**
68. **Water Solubility**
69. **Water Solubility**
70. **Water Solubility**
71. **Water Solubility**
72. **Water Solubility**
73. **Water Solubility**
74. **Water Solubility**
75. **Water Solubility**
76. **Water Solubility**
77. **Water Solubility**
78. **Water Solubility**
79. **Water Solubility**
80. **Water Solubility**
81. **Water Solubility**
82. **Water Solubility**
83. **Water Solubility**
84. **Water Solubility**
85. **Water Solubility**
86. **Water Solubility**
87. **Water Solubility**
88. **Water Solubility**
89. **Water Solubility**
90. **Water Solubility**
91. **Water Solubility**
92. **Water Solubility**
93. **Water Solubility**
94. **Water Solubility**
95. **Water Solubility**
96. **Water Solubility**
97. **Water Solubility**
98. **Water Solubility**
99. **Water Solubility**
100. **Water Solubility**